

Designing an online learning environment for the qualification of teachers: the case of the PAS in the University of Perugia¹

Floriana Falcinelli^a, Mina De Santis^b, Maria Filomia^c

^a*University of Perugia, Italy, floriana.falcinelli@unipg.it*

^b*University of Perugia, Italy, mina.desantis@unipg.it*

^c*University of Perugia, Italy, maria.filomia@alice.it*

Abstract

The purpose of this paper is to analyse the experience of blended learning conducted in the special Path Enabling Course (PAS: training course reserved for staff working in schools for at least 3 years), at the University of Perugia. The research presented aims to investigate whether, and to what extent, the proposed online course has enabled students to experience different forms of meaningful learning, both individually and in groups; and in which courses they have been stimulated by critical thinking, creativity and metacognitive skills.

Keywords: Higher education, Lifelong learning, blended learning.

Introduction

Today, training in education requires the broadening of horizons to fit our current international lifestyle, contributing not only to the economical and social development of the country, but also to a cultural challenge that integrates the subjects in a global *citizenship*. This scenario refers to both educational institutions and training and educational policies.

From the program ‘Education and Training 2020’ (ET 2020) – strategic plan for European cooperation in the field of education and training – it is possible to conclude that educational and national training systems must address the necessary means to allow all citizens to completely fulfil their potential within the perspective of lifelong knowledge by taking into account learning in every context, both formal and informal, and at every level.

Strategic objectives:

- lifelong learning and mobility must become a reality, creating national qualification frameworks linked to the *European Qualification Framework*;
- the quality and efficacy of education and training must be enhanced, allowing all citizens to achieve their key competencies;

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- equity, social cohesion and active citizenship should be promoted through professional and essential competencies, promoting citizen's employability and the deepening of their education and training, their active citizenship and an intercultural dialogue; tackling the issue of educational disadvantage, providing a high quality of early childhood and inclusive education;
- creativity and innovation, including entrepreneurship, must be fostered at every level of education and training through the acquisition of transversal competencies by all citizens.

How can one answer this challenge to guarantee everyone an education that is useful on a global scale? 'It is not possible to reform the *what* without thinking together about the *how*: it is not possible, namely, to proceed toward a coherent reform of the average concept of education and training without reviewing, as a work in progress, purposes and goals and, in other words, the architecture of the educational and training systems²' (Baldacci, Frabboni, Margiotta, 2012, p. 3). Outlining the educational path of those who deal with education and training is already a step towards change. The first message comes from the Minister of Education, University and Research, which redefines the requirements and methods of the initial teacher training for preschool, primary school and middle and high school (Decree Law of 10th September 2010, n.249): it outlines new scenarios for education and training, involving also Universities, called upon to deal not only with initial training, but also *lifelong learning*. The University must adopt a view of training to take into account the complete lifecycle; it must become the 'place where it is possible to restructure, reorganise, criticise and prioritise knowledge acquired in different places including informally.'³ (Feutrie, 2011, p. 58–59). It is a training that goes beyond *vocational specialism*⁴ (Alessandrini, 2011, p. 85), which has, as a final goal, the education and training of the '*total man*, a man who must receive an integral, and especially a moral education. A complete man, educated, helpful, open to others and to dialogue⁵.' (De Santis, 2014, p. 264). The Active Internship (in Italian *Tirocinio Formativo Attivo* – TFA) and the Special Qualifying Course (in Italian *Percorso Abilitante Speciale* – PAS, a training course for staff working in schools for at least three years), both established by universities, have been set up not only as courses for achievement of the teaching qualification, but also as in-service training for teachers. The training not only allows the participant to acquire competencies, but also makes it possible to renew them. For teachers, training becomes an essential element 'since the renewing of their relationship with new skills, new knowledge frameworks, and the requirements of society and human sciences is inherent to their profession⁶.' (Claris, 2010. p. 10).

1. The training course in PAS at the University of Perugia

PAS are special qualifying courses for teachers' categories that have particular service requirements; they were established by Decree regulation of 25th March 2013 n.81 that modified the D.M. n.249/2010 and the subsequent D.D.G. n.58 25/07/2013. These regulations highlight how the training course should address: (a) the verification and strengthening of knowledge of the disciplines taught in the class and the improvement of the pertinent teaching competencies; (b) the acquisition of digital skills recommended by the European Parliament and Council on 18th December 2006; and (c) the acquisition of teaching skills conducive to the education of students with disabilities.

The traditional teaching-training methods and strategies employed in conventional university instruction do not meet the training needs of students enrolling in these special qualifying courses (PAS). The PAS are aimed at qualifying those teachers already teaching a discipline or senior SEN (Special Education Needs) teachers who have practiced for some years, as well as at workers who may find it difficult to physically attend courses for various reasons. While they may already possess a degree, they still need to experience new ways of building knowledge with a new orientation and, in some cases, a review of current professional practices.

The professionalism of the teacher must be seen today as a hermeneutical 'outfit' to wear in the season of the school of autonomy; the teacher is characterised as an hermeneutical-critical subject who knows how to give sense to his own doing and to the system to which he belongs. (Laneve C., *Manuale di Didattica*, La Scuola, Brescia, 2011). For this reason, the initial training must be set up as a virtuous circle of theory–praxis, where the future teacher is put

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in the position not only of acquiring new knowledge in educational sciences and different disciplines, but also of organizing, linking and reworking this new knowledge as it relates to the teaching experiences acted out in the classroom context. This is an extremely complex path that requires time and spaces quite different from those imposed by in-presence attendance and traditional group work methods, which are not always easy to carry out in the existing classroom structures.

For this reason, it is necessary to complement the in-presence training processes with *blended e-learning* activities, as recommended further by the Decree that specified the starting up and organisation of such courses (Departmental Decree n.45 of 22 November 2013). This decree allowed these courses to integrate in-presence educational activities (for at least one-third of the teaching hours) and ‘study activities including activities in e-learning’. Therefore, providing an online environment with flexible resources would allow the student to experience different forms of meaningful learning, both individually and in groups, and would stimulate critical thinking and creative and metacognitive skills. Such an online learning environment, open and flexible, allows students to negotiate their own educational ‘path’ with regard to how, when and where to learn. This different teaching and learning setting opens up some interesting prospects, because alongside a traditional university education, based mainly on attendance as required in a closed system, it is possible to integrate a new way of training and educating, in which what is shared is not the physical space, but interactions, construction and knowledge. With this in mind, it was decided to use the *E-studium* platform, which is an adaptation of MOODLE, the open source environment, built according to a social constructivist setting, continuously fostered and developed by a widespread global community, which is very active in Italy as well. It was then decided to design and set up a teaching–learning environment using the e-learning approach that would allow the student to carry out online activities complementing classroom activities. This, in particular, has been achieved with the course on learning disabilities created by PhD candidate Cristina Gaggioli. This online environment was furthermore connected to the School Grant Foundation of the Compagnia S. Paolo in an agreement stipulated with the Department of Philosophy, Social and Human Sciences and Education, which provides the possibility of taking courses for teachers in training, and one in particular: Managing teaching (www.fondazione scuola.it/iniziative/formazione-on-line/presentazione). It must be clarified that, given the specific nature of the course, students, except for the 30% of hours of compulsory attendance in the class, could fulfil the remaining hours through activities performed in the online courses, although an effort was made to integrate the two periods continuously in the training project.

2. Objectives of the online training environment project

The following specific objectives were identified when designing the learning environment and path:

- to complement and develop the educational activities in class with online activities, both with self-study and collaborative activities in small groups;
- to facilitate open access to study materials and consideration of the course’s topics through online discussion;
- to foster periods of regular interaction with teachers and tutors for necessary support;
- to allow an expansion of the study contents through the building of specific materials by students along with the sharing of knowledge maps;
- to research the study’s topics through the use of online resources, fostering active participation of students in the building of knowledge;
- to foster collaboration in groups for the planning of educational activity;
- to foster spaces for shared communication, discussion and consideration of the training experience;
- to allow a constant assessment of the learning processes and students’ self-assessment of their knowledge acquisition.

3. Students’ assessment of the educational activity

At the end of the activities, as an activity built into the ones required by the course, two semi-structured anonymous questionnaires of online evaluation were submitted to the students. The first questionnaire, for an assessment of the blended course of Education Sciences, aimed to establish on a scale of four the popularity of the courses compared to all the activities contained in the courses of Education Sciences. After the information needed to

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describe the sample, they were also asked to indicate what contribution the course could make to progress in school practices. The second questionnaire was designed to evaluate, on scale of four, the satisfaction of the participants specifically to the proposed online course, particularly in terms of: language, topics, navigation procedures. An open question assessed the relevance and effectiveness of the online course in teaching practices.

3.1. Participants

Participants in this research represent the totality of students who attended PAS courses at the University of Perugia. In order to describe the demographic sample, the questionnaire asked the participants' age, the course of study, and to specify if they were SEN teachers or if they taught any other specific discipline. The sample's average age is 40.93 years; the difference in age of the participants, which ranges from 29 to 56 years, is striking. The participants were attending different courses of study; the largest group was in A033, with 26.8% of the sample; only 13% were SEN teachers.

3.2. Results

In the first semi-structured questionnaire concerning the online part of the course, besides the part concerning the sample description, two more questions were posed to the participants: one asking them to assess the satisfaction with the online part of the integrated course of Education Sciences (Table n.1); one asking them to point out elements deemed as important (histogram n.1). In order to assess satisfaction, a question was presented composed of 11 items, using a four-mode scale: 1 *not at all*, 2 *a little*, 3 *fairly*, 4 *very much*.

Table 1. Degree of satisfaction.

	1	2	3	4
Is the language clear and are the assignments feasible?	4%	24%	55%	17%
Are the chosen topics relevant to the students' needs?	1%	6%	51%	42%
Have the chosen topics been dealt with in accordance with the students' needs?	3%	16%	50%	31%
Are the surfing procedures, within the different web pages, clear?	6%	26%	43%	25%
Is there a conformity between the stated objectives and the activities presented?	2%	10%	59%	29%
Do the activities allow one to learn and modify one's own concepts and approaches to teaching ?	1%	11%	51%	37%
Have the activities presented fostered a critical assessment of one's knowledge?	1%	10%	43%	46%
Have the proposed activities stimulated a reflection on teaching practices?	0%	5%	34%	61%
Have the proposed activities stimulated the starting of building of skills?	1%	7%	42%	50%
Are you satisfied with the online course?	6%	16%	57%	21%
Do you think that the online course could be useful for other colleagues and other users?	4%	9%	45%	42%

The analysis of Table 1 shows an overall positive evaluation on every indicator presented. The contents are clear enough for 55% of the participants. Concerning the objectives, 46% responded that the activities presented stimulated a critical elaboration of knowledge and 50% responded that it allowed for the starting of building of skills.

On the whole, 57% were satisfied enough with the online course and 42% deemed it very useful to suggest the online course to other colleagues. Through an open question stimulus, the participants were asked if they had ‘*other elements to highlight*’ concerning the online course. The answers were analysed through the NVivo software for its qualitative data analysis. The analysis took place in subsequent phases, conceptually higher and higher, and after the answers to the questionnaire had been input in the software, an initial codification, was carried out that allowed highlighting of all the elements found by the participants. The codification took place through the attribution of nodes in sentences or parts of sentences. In the second reading, the initial codification was organised in macro-categories, which are described in the following figure.

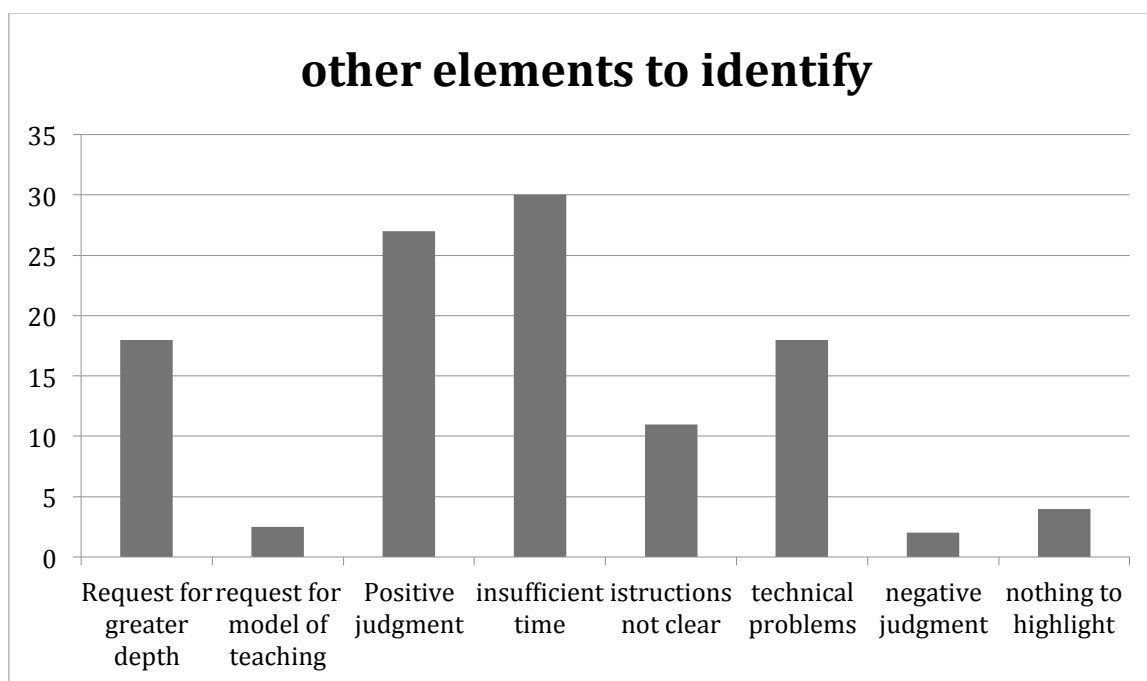


Fig. 1 Further elements to highlight.

Sixteen percent asked for further investigation of some topics such as difficult classes or asked to analyse case studies; more importantly, more adequate contents for Secondary School were requested. Twenty-three percent of the sample expressed a very positive view of the online course, while only 2% expressed a totally negative judgment. Another 26% of participants expressed the problematic aspect of time, valued as insufficient for carrying out the proposed course activities; 10% pointed out the lack of clarity in the assignments, and 17% highlighted technical problems concerning the platform and the formats of documents within the online materials. Two percent asked for other means for communicating teaching methods, in particular the setting of self-evaluation tests and the classroom sharing of the work carried out online.

The second questionnaire administered to the participants concerned the satisfaction with the entire course. This article presents only the items concerning the online course. In this case also a four mode scale was used: (1) *not at all*, (2) *a little*, (3) *fairly*, (4) *very much*. The answers to the question ‘*Was the online part of the course user friendly concerning its use and browsing?*’ were, in this case as well, positive (51% answered fairly and 29% very much); only 3% answered not at all. It was also asked ‘*in what measure the classroom activities could have been carried out online?*’: 52% answered fairly and 20% very much. Interesting elements emerge from the analysis of two open questions that were also read and codified through the NVivo software. The first asked to express ‘*other remarks on the course*’. A globally positive response was expressed by 38% of the sample, highlighting how the course produced: professional improvement, consideration of the practices, and stimulation of the attention of students with SEN and the use of Information and Communication Technologies (ICT). Forty-seven percent of codification highlighted the time dimension as a problematic aspect; in this case as well it was seen as insufficient for carrying out all the online activities, considering the school commitments of the participants. These data were confirmed by

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the second open question, ‘*possible proposals for improvement*’, in which 44% of the codification suggested a time schedule and organisation that would allow a participant to carry out the assignment in a more relaxed way, combining more effectively the periods of training/working.

4. Reflection on the course and open problems

The experience that was conducted allowed us to understand how it is still difficult to involve teachers and pupils in e-learning educational courses, since both need a long process of training and support.

The fostering of an open source technological infrastructure such as MOODLE made it possible to effectively answer the educational needs and requests expressed by the project. In this regard, an environment can result more or less valid in the measure in which it becomes an effective resource within a coherent educational design and in accordance with the needs of the different educational informative contexts. The designing of an e-learning course cannot be ascribed to a simple combination of technical tools, but rather implies the undertaking of an innovative educational model and, furthermore, the identification of specific working moments that are well defined in the planning, even though they may not be conceived according to a strict linear logic.

In this sense, it seemed important to us to highlight the need for fostering the training processes, especially those addressing adults, educational models that are less transmissive and more problem-posing, and to experience forms of self-assessment and process evaluation that would allow students to develop metacognitive strategies, to identify and enhance the necessary essential elements of improvement.

In the same way, the role of teacher, tutor and even pupil should be reconsidered, since an online course cannot be merely the telematic transposition of educational models suitable for the classroom, but requires new, specific processes. The very method of production and presentation of study materials must be carefully planned for the online mode, without falling into the rigid logic of *learning objects*.

We must not forget that efficient management of an online educational project requires not only a valid technological infrastructure from a technical viewpoint, but also the integration of different human and professional resources with specific skills (technical, IT, educational, of content, etc).

In particular, this experience allowed us to be even more conscious of the fact that an online learning environment cannot be considered merely to be advanced technological structures – technical tools to their own end – but should also be analysed as complex media, which are profoundly changing the process of educational knowledge and communication. As open technologies that allow the insertion of personal elements, they can be manipulated and established as flexible, explorative, and socially useful, making the educational intervention active, participatory and creative for everyone: technical staff, teachers, and pupils. Everyone should find in this context a stimulating element of personal and professional research and growth.

5. Future prospects

To formulate future prospects for teacher training, the concept of the profession needs to be reconsidered as well as the paths for professional learning. Changing paradigms become a necessity and a goal to pursue. It is not conceivable to think that giving lessons on *how you do it* or *how it should be done* is enough to guarantee competence among teachers. Teachers’ education is implicit in their daily activity and, therefore, the central question becomes the relationship between research and practice since ‘teachers have, as professionals, a corpus of specialistic knowledge acquired with training and experience⁷’ (Tochon, 1993, p. 26). Only by integrating research and training is it possible to enrich the discourse on the *practice* and *the observation of the practice* that can explicitly shape the thoughts of teachers; and ‘this way of doing research – that uses a teacher’s subjectivity, on the premise that the teacher actively builds significance into his own educational action – makes research an indirectly educational activity⁸’ (Damiano, 2006, p. 179). Therefore, training becomes a means through which to begin a process of transformation and reorganisation of acquired knowledge in order to personalise the educational path; it becomes effective based on the analysis of what engages teachers on a daily basis. A means to give intellectual stimuli and answer individual needs is essential, because what is missing today is an educational model able to answer

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individuality: ‘effective learning in adults is made of an active search for meaning in which satisfaction and personal experience are balanced’⁹ (Marczely, 1999, p. 41). Conducting research–training helps to enhance the quality of educational action; but most of all, it implements research in the educational areas and promotes new ideas for further fields of investigation. In this way, this course of action elaborates *experiential theories* that provide tools to deal with everyday life because ‘formalist pedagogical theories often are too abstract; they do not help in realizing the hermeneutics of the context’¹⁰ (Mortari, 2012, p. 92). In educational fields, there are no rules to apply; therefore, the ability to reflect well on specific situations is necessary. The teacher will have to develop heuristic and reflective competence to build a body of knowledge in order to answer practical problems: the classroom will be the workshop through which research, experience, reflection and personalisation can enrich teachers’ professionalism and give rise to transformative processes that bring constant renewal.

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⁹ Translation by author

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